

switching data packets traversing the network, based on a number of the detected network nodes, and configuring by the network manager each network switch of the network to *switch* each of the data packets ***based on a corresponding switching tag***, added to a *start* of the corresponding data packet and ***the switching tag having the selected tag size of the address field***, without altering the content of the header.

Hence, the *switching* of the data packet ***based on the corresponding switching tag*** requires that the switching tag that is added at the *start* of the corresponding data packet is to be used to *switch* (i.e., address) the data packet by the claimed "each network switch" to the appropriate destination in the network. These and other features are neither disclosed nor suggested in the applied prior art.

Benayoun et al.

The Examiner concedes that Benayoun does not disclose "detecting nodes on a network by a network manager and selecting a size of address fields to be used for switching data packets traversing the network based on a number of the detected network nodes."

Further, Benayoun fails to disclose or suggest selecting a tag to be used for *switching* data packets traversing the network, as claimed. To the contrary, the disclosed label 18 that is added to the beginning of the packet 16 is used to **identify each flow of data** that is composed of a plurality of data packets transmitted between a source node and a destination node (see, e.g., Abstract at line 5-6 and column 3, lines 7-22). In particular, column 3, lines 7-9 specify that "when a packet 16 is received by a switching node 12, a classification process identifies if this packet belongs to a ***known flow of data***." Moreover, column 3, lines 10-14 specify that numerous classification methods may be used to classify the packet, including identifying parameters from the packet header including a flow-id field, a destination address, a source address, a port number, *or perhaps the protocol employed*. Use of parameters such as flow-

id field, source address, port number, or "perhaps the protocol employed" demonstrates that the label 18 is not used for switching the data packets.

Moreover, column 3, lines 23-45 explicitly teach away from the label 18 being used for switching data packets, because this portion describes that in response to reception of a new packet that is not associated with any existing flow of data, the label assigning mechanism 20 in the switching node 12 adds a **default label** to the packet 16, requiring the label assigning mechanism 20 and 22 to execute the same algorithm in order to generate "the same label ... for a given data flow by both label assigning mechanism 20 and 22." Column 3, lines 36-40 further specify that "[t]his common label is then stored in an assigned label table 24 of the switching node 12 and in an assigned label table 26 of the adjacent switching node 14, together with the header bytes of the packet."

Consequently, Benayoun teaches away from the claimed switching each of the data packets based on the corresponding switching tag because Benayoun requires first sending a **default label** that requires both the source and destination switching nodes to calculate the flow-specific label that is to be used.

Fan

Fan neither discloses nor suggests the claimed feature of configuring the network switches to switch each of the data packets based on a corresponding switching tag added to a start of the corresponding data packet, as claimed. Rather, Fan teaches away from is claimed feature by explicitly specifying that "the long addresses in the packet header are ***replaced*** by the corresponding short addresses, and the address type (long or short) is identified in the header" (column 6, lines 49-52); hence, "the packet with the shortened header is then forwarded to the destination node within the virtual address using the short address" (col. 6, lines 55-57). Note that an "address type field" is added prior to each source and destination address to enable a

receiving node to identify whether the address is a short address or long address (col. 6, lines 17-20).

Fan also emphasizes that the short addresses are used to reduce the number of bits transmitted within the virtual network for each packet (col. 7, lines 4-6); however, "if using a short address is not appropriate for any reason, the virtual network does not replace the long address with the short address" (col. 6, lines 61-63).

Hence, Fan contemplates violating existing Internet Protocol and Ethernet protocol address sizes by reducing the IP address fields and MAC address fields beyond their minimum size (col. 5, line 64 to col. 6, line 14). Fan also recognizes that such violation of existing address protocols may not be appropriate in some circumstances, and in those cases teaches that the long addresses should not be replaced with short addresses (col. 6, lines and 61-63).

Fan also neither discloses nor suggests the claimed feature of configuring the network switches to switch each of the data packets based on a corresponding switching tag added to a start of the corresponding data packet, without altering the content of the header as claimed. Rather, Fan teaches away from this claimed feature by explicitly specifying that "the long addresses in the packet header are *replaced* by the corresponding short addresses, and the address type (long or short) is identified in the header" (column 6, lines 49-52); hence, "the packet with the shortened header is then forwarded to the destination node within the virtual address using the short address" (col. 6, lines 55-57).

Thus, each of the independent claims, however, do *not* specify replacing existing address fields as in Fan, but rather specify *adding the switching tag* (having the selected size based on the number of detected network nodes) *to start of the existing data packet*.

The Hypothetical Combination

The rejection provides an argument why one skilled in the art would have combined the teachings of the applied references *generally* (i.e., according to their predictable use); however,

the rejection fails to provide any analysis of any “apparent reason” that one of ordinary skill in the art would have provided any improvements *beyond* (i.e., more than) the predictable use of the applied references according to their established functions.¹

The hypothetical combination urged in the rejection only addresses combining the references generally, with no disclosure or suggestion for teaching the claimed adding of the switching tag *without altering the content of the header*, as claimed. The rejection disregards that Fan et al. teaches replacing the long address with a short address: in fact, the hypothetical combination still would rely on the short address (thereby altering the content of the header) because the use of the default label in Benayoun demonstrates that the default label cannot be used for switching a packet, as claimed.

Hence, the rejection disregards the explicitly claimed feature that the *switching tag* at the *start of the packet* is used for switching the data packet, *without altering the content of the header*.² As such, the rejection improperly relies upon *ex post* reasoning by “[reading] into the prior art the teachings of the invention in issue”.³

For these and other reasons, this §103 rejection should be withdrawn.

It is believed the dependent claims are allowable in view of the foregoing.

¹ See *KSR Int'l v. Teleflex, Inc.* No. 04-1350, Slip. op. at 13-14, 82 USPQ2d 1385, 1396.

²It is well settled that each and every claim limitation must be considered. As specified in MPEP §2143.03, entitled “**All Claim Limitations Must Be Taught or Suggested**”: “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). ‘All words in a claim must be considered in judging the patentability of that claim against the prior art.’ *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” MPEP §2143.03 at 2100-131 (Rev. 5, Aug. 2006).

³ *KSR Int'l v. Teleflex, Inc.*, 550 U.S. 398, ___, Slip. op. at 17, 82 USPQ2d 1385, 1397 (2007) (*quoting Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459, 474 (1966)).

In view of the above, it is believed this application is in condition for allowance, and such a Notice is respectfully solicited.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-0687, under Order No. 95-512, and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'L R Turkevich', with a long horizontal flourish extending to the right.

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